

What I claim as my invention is:

1. An aircraft with a main body, a primary lifting
mechanism and a secondary lifting mechanism,
which main body has a forward end and an aft end,
5 with the primary lifting mechanism and the secondary
lifting mechanism connected to the main body of
the aircraft in tandem order, and with the aircraft
able to achieve flight by means of upward
forces exerted on the main body of the aircraft
10 by the primary lifting mechanism and the
secondary lifting mechanism while the primary
lifting mechanism and the secondary lifting
mechanism are connected to the main
body of the aircraft in tandem order,
15 and which primary lifting mechanism comprises a
powerplant as a means for providing downwardly
extending thrust to the aircraft, and which secondary
lifting mechanism comprises a powerplant as the means
for providing downwardly extending thrust to the aircraft,
20 and which primary lifting mechanism is connected
to the main body of the aircraft by a tilt
enabling joint such that during flight of the
aircraft the primary lifting mechanism can be

tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the primary lifting mechanism can be tilted in lateral

5 directions relative to the main body of the aircraft during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering the

10 lateral direction or angle of tilt of the primary lifting mechanism relative to the main body of the aircraft, and which said tilt enabling joint is a primary tilt enabling joint, with the primary lifting

15 mechanism able to exert an upward force on the forward end of the main body of the aircraft through the primary tilt enabling joint, and which secondary lifting mechanism is connected to the main body of

20 the aircraft by an additional tilt enabling joint, which said additional tilt enabling joint is a secondary tilt enabling joint, and which said secondary lifting mechanism is

connected to the main body of the aircraft by the secondary tilt enabling joint such that during flight of the aircraft the secondary lifting mechanism can be tilted in a plurality of

5 directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the secondary lifting mechanism can be tilted in lateral directions relative to the main body during flight of the aircraft,

10 and such that a direction of travel of the aircraft during flight can be altered by altering the lateral direction or angle of tilt of the secondary lifting mechanism relative to the

15 main body, and which secondary tilt enabling joint is such that the secondary lifting mechanism can be tilted in a controlled manner in a lateral direction with respect to the main body of the aircraft during flight of

20 the aircraft that is opposite to a lateral direction that the primary lifting mechanism can be tilted in with respect to the main body of the aircraft by means of the primary tilt enabling joint during flight of the aircraft,

25 and which secondary lifting mechanism is able to exert an upward force on the aft end of the

main body of the aircraft through the secondary tilt enabling joint, with the primary tilt enabling joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft
5 able to achieve flight by means of an upward force exerted on the main body of the aircraft by the primary lifting mechanism through the primary tilt enabling joint and an upward force exerted on the main body of the aircraft
10 by the secondary lifting mechanism through the secondary tilt enabling joint while the primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order, and with controlled lateral tilting of the
15 primary lifting mechanism and the secondary lifting mechanism able to occur during flight while the primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order.

2. An aircraft with a main body, a primary lifting
20 mechanism and a secondary lifting mechanism, which main body has a forward end and an aft end, with the primary lifting mechanism and the secondary lifting mechanism connected to the main body of the aircraft in tandem order, and with the aircraft
25 able to achieve flight by means of upward

forces exerted on the main body of the aircraft
by the primary lifting mechanism and the
secondary lifting mechanism while the primary
lifting mechanism and the secondary lifting
5 mechanism are connected to the main in
body of the aircraft in tandem order,

and which primary lifting mechanism comprises
a rotor, an engine assembly, and a plurality of
blades, with the said blades connected to the
10 rotor, and which said engine assembly is able
to rotate the said rotor, with the blades connected
to the rotor such that when the rotor is rotated by
the said engine assembly air can be forced in a
downward direction by means of the blades rotating
15 around the rotor, with the primary lifting
mechanism able to exert an upward force on the
forward end of the main body of the aircraft by
forcing air in a downward direction by way of the
blades rotating around the rotor,

20 and the secondary lifting mechanism comprises
a rotor, an engine assembly, and a plurality of
blades, with the blades of the secondary lifting
mechanism connected to the rotor of the secondary
lifting mechanism, and which engine assembly of
25 the secondary lifting mechanism is able to rotate

the rotor of the secondary lifting mechanism,
with the blades of the secondary lifting mechanism
connected to the rotor of the secondary lifting
mechanism such that when the rotor of the secondary
5 lifting mechanism is rotated by the engine assembly
of the secondary lifting mechanism air can be forced
in a downward direction by means of the blades of the
secondary lifting mechanism rotating around the rotor
of the secondary lifting mechanism, with the secondary
10 lifting mechanism able to exert an upward force on
the aft end of the main body of the aircraft by
forcing air in a downward direction by way of the
blades of the secondary lifting mechanism rotating
around the rotor of the secondary lifting mechanism,
15 and which primary lifting mechanism is connected
to the main body of the aircraft by a tilt
enabling joint such that during flight of the
aircraft the primary lifting mechanism can be
tilted in a plurality of directions and angles
20 relative to the main body of the aircraft, in
a controlled manner, and such that the primary
lifting mechanism can be tilted in lateral
directions relative to the main body of the
aircraft during flight of the aircraft,
25 and such that a direction of travel of the

aircraft during flight can be altered by altering the lateral direction or angle of tilt of the primary lifting mechanism relative to the

- 5 main body of the aircraft, and which said tilt enabling joint is a primary tilt enabling joint, with the primary lifting mechanism able to exert an upward force on the forward end of the main body of the
- 10 aircraft through the primary tilt enabling joint, and which secondary lifting mechanism is connected to the main body of the aircraft by an additional tilt enabling joint, which said additional tilt enabling
- 15 joint is a secondary tilt enabling joint, and which said secondary lifting mechanism is connected to the main body of the aircraft by the secondary tilt enabling joint such that during flight of the aircraft the secondary
- 20 lifting mechanism can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the secondary lifting mechanism can be tilted in lateral directions relative
- 25 to the main body during flight of the aircraft,

and such that a direction of travel of the aircraft during flight can be altered by altering the lateral direction or angle of tilt of the secondary lifting mechanism relative to the main body, and which secondary tilt enabling joint is such that the secondary lifting mechanism can be tilted in a controlled manner in a lateral direction with respect to the main body of the aircraft during flight of the aircraft that is opposite to a lateral direction that the primary lifting mechanism can be tilted in with respect to the main body of the aircraft by means of the primary tilt enabling joint during flight of the aircraft, and which secondary lifting mechanism is able to exert an upward force on the aft end of the main body of the aircraft through the secondary tilt enabling joint, with the primary tilt enabling joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft able to achieve flight by means of an upward force exerted on the main body of the aircraft by the primary lifting mechanism through the primary tilt enabling joint and an upward force exerted on the main body of the aircraft

by the secondary lifting mechanism through
the secondary tilt enabling joint while the
primary lifting mechanism and the secondary
lifting mechanism are maintained in tandem order,
5 and with controlled lateral tilting of the
primary lifting mechanism and the secondary lifting
mechanism able to occur during flight while the
primary lifting mechanism and the secondary lifting
mechanism are maintained in tandem order.

10 3. An aircraft with a main body, a primary lifting
mechanism and a secondary lifting mechanism,
which main body has a forward end and an aft end,
with the primary lifting mechanism and the secondary
lifting mechanism connected to the main body of
15 the aircraft in tandem order, and with the aircraft
able to achieve flight by means of upward
forces exerted on the main body of the aircraft
by the primary lifting mechanism and the
secondary lifting mechanism while the primary
20 lifting mechanism and secondary lifting
mechanism are connected to the main
body of the aircraft in tandem order,
which primary lifting mechanism is a
turboprop, and which primary lifting mechanism is
25 attached to the primary tilt enabling joint such

that air can be forced in a downward direction
by the primary lifting mechanism, and such
that by forcing air in a downward direction
the primary lifting mechanism is able to
5 exert an upward force on the forward end of the
main body of the aircraft,

and the secondary

lifting mechanism is a turboprop, which

secondary lifting mechanism is attached to the
10 secondary tilt enabling joint such that air can
be forced in a downward direction by the
secondary lifting mechanism, and such
that by forcing air in a downward direction
the secondary lifting mechanism is able to
15 exert an upward force on the aft end of the
main body of the aircraft,

and which primary lifting mechanism is connected
to the main body of the aircraft by a tilt
enabling joint such that during flight of the
20 aircraft the primary lifting mechanism can be
tilted in a plurality of directions and angles
relative to the main body of the aircraft, in
a controlled manner, and such that the primary
lifting mechanism can be tilted in lateral
25 directions relative to the main body of the

aircraft during flight of the aircraft,
and such that a direction of travel of
the aircraft during flight can be
altered by altering the lateral
5 direction or angle of tilt of the
primary lifting mechanism relative to the
main body of the aircraft, and which said
tilt enabling joint is a primary tilt
enabling joint, with the primary lifting
10 mechanism able to exert an upward force on
the forward end of the main body of the
aircraft through the primary tilt enabling
joint, and which secondary lifting
mechanism is connected to the main body of
15 the aircraft by an additional tilt enabling
joint, which said additional tilt enabling
joint is a secondary tilt enabling joint, and
which said secondary lifting mechanism is
connected to the main body of the aircraft by
20 the secondary tilt enabling joint such that
during flight of the aircraft the secondary
lifting mechanism can be tilted in a plurality of
directions and angles relative to the main body
of the aircraft, in a controlled manner,
25 and such that the secondary lifting

mechanism can be tilted in lateral
directions relative to the main body during
flight of the aircraft, and such that
a direction of travel of the aircraft during
5 flight can be altered by altering the
lateral direction or angle of tilt of the
secondary lifting mechanism relative to the
main body, and which secondary tilt enabling
joint is such that the secondary lifting
10 mechanism can be tilted in a controlled
manner in a lateral direction with respect to
the main body of the aircraft during flight of
the aircraft that is opposite to a lateral
direction that the primary lifting mechanism
15 can be tilted in with respect to the main body
of the aircraft by means of the primary tilt
enabling joint during flight of the aircraft,
and which secondary lifting mechanism is able
to exert an upward force on the aft end of the
20 main body of the aircraft through the secondary
tilt enabling joint, with the primary tilt enabling
joint and the secondary tilt enabling joint connected
to the main body of the aircraft, and with the aircraft
able to achieve flight by means of an upward
25 force exerted on the main body of the aircraft

by the primary lifting mechanism through the
primary tilt enabling joint and an upward
force exerted on the main body of the aircraft
by the secondary lifting mechanism through
5 the secondary tilt enabling joint while the
primary lifting mechanism and the secondary
lifting mechanism are maintained in tandem order,
and with controlled lateral tilting of the
primary lifting mechanism and the secondary lifting
10 mechanism able to occur during flight while the
primary lifting mechanism and the secondary lifting
mechanism are maintained in tandem order.

4. An aircraft with a main body, a primary lifting
mechanism and a secondary lifting mechanism,
15 which main body has a forward end and an aft end,
with the primary lifting mechanism and the secondary
lifting mechanism connected to the main body of
the aircraft in tandem order, and with the aircraft
able to achieve flight by means of upward
20 forces exerted on the main body of the aircraft
by the primary lifting mechanism and the
secondary lifting mechanism while the primary
lifting mechanism and the secondary lifting
mechanism are connected to the main in
25 body of the aircraft in tandem order,

and which primary lifting mechanism comprises
a rotor, an engine assembly, and a plurality of
blades, with the said blades connected to the
rotor, and which said engine assembly is able
5 to rotate the said rotor, with the blades connected
to the rotor such that when the rotor is rotated by
the said engine assembly air can be forced in a
downward direction by means of the blades rotating
around the rotor, with the primary lifting mechanism
10 able to exert an upward force on the forward end of
the main body of the aircraft by forcing air in a
downward direction by way of the blades rotating
around the rotor,

and the secondary lifting mechanism consists of
15 a jet engine, which jet engine is attached to the
secondary tilt enabling joint such that the jet
engine is able to force exhaust gases to travel
in a downward direction and such that by forcing
exhaust gases to travel in a downward direction
20 the jet engine can exert an upward force on the
aft end of the main body,

and which primary lifting mechanism is connected
to the main body of the aircraft by a tilt
enabling joint such that during flight of the
25 aircraft the primary lifting mechanism can be

tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the primary lifting mechanism can be tilted in lateral

5 directions relative to the main body of the aircraft during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering the

10 lateral direction or angle of tilt of the primary lifting mechanism relative to the main body of the aircraft, and which said tilt enabling joint is a primary tilt enabling joint, with the primary lifting

15 mechanism able to exert an upward force on the forward end of the main body of the aircraft through the primary tilt enabling joint, and which secondary lifting mechanism is connected to the main body of

20 the aircraft by an additional tilt enabling joint, which said additional tilt enabling joint is a secondary tilt enabling joint, and which said secondary lifting mechanism is connected to the main body of the aircraft by

25 the secondary tilt enabling joint such that

during flight of the aircraft the secondary lifting mechanism can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner,

5 and such that the secondary lifting mechanism can be tilted in lateral directions relative to the main body during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering

10 the lateral direction or angle of tilt of the secondary lifting mechanism relative to the main body, and which secondary tilt enabling joint is such that the secondary lifting mechanism can be tilted in a controlled

15 manner in a lateral direction with respect to the main body of the aircraft during flight of the aircraft that is opposite to a lateral direction that the primary lifting mechanism can be tilted in with respect to the main body

20 of the aircraft by means of the primary tilt enabling joint during flight of the aircraft, and which secondary lifting mechanism is able to exert an upward force on the aft end of the main body of the aircraft through the secondary

25 tilt enabling joint, with the primary tilt enabling

- joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft able to achieve flight by means of an upward force exerted on the main body of the aircraft
- 5 by the primary lifting mechanism through the primary tilt enabling joint and an upward force exerted on the main body of the aircraft by the secondary lifting mechanism through the secondary tilt enabling joint while the
- 10 primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order, and with controlled lateral tilting of the primary lifting mechanism and the secondary lifting mechanism able to occur during flight while the
- 15 primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order.
5. The aircraft of claim 4 wherein the said jet engine is a turbojet.
6. The aircraft of claim 4 wherein the said jet
- 20 engine is a turboprop.
7. An aircraft with a main body, a primary lifting mechanism and a secondary lifting mechanism, which main body has a forward end and an aft end, with the primary lifting mechanism and the secondary
- 25 lifting mechanism connected to the main body of

the aircraft in tandem order, and with the aircraft
able to achieve flight by means of upward
forces exerted on the main body of the aircraft
by the primary lifting mechanism and the
5 secondary lifting mechanism while the primary
lifting mechanism and the secondary lifting
mechanism are connected to the main
body of the aircraft in tandem order,

and which primary lifting mechanism comprises a
10 rotor, an engine assembly, and a plurality of
blades, with the said blades connected to the
rotor, and which said engine assembly is able
to rotate the said rotor, with the blades connected
to the rotor such that when the rotor is rotated by
15 the said engine assembly air can be forced in a
downward direction by means of the blades rotating
around the rotor, with the primary lifting mechanism
able to exert an upward force on the forward end of
the main body of the aircraft by forcing air in a
20 downward direction by way of the blades rotating
around the rotor,

and the secondary lifting mechanism consists of
a plurality of jet engines, which jet engines
are attached to the secondary tilt enabling joint
25 such that the jet engines are able to force

exhaust gases to travel in a downward direction
and such that by forcing exhaust gases to travel
in a downward direction the jet engines can exert
an upward force on the aft end of the main body,

- 5 and which primary lifting mechanism is connected
to the main body of the aircraft by a tilt
enabling joint such that during flight of the
aircraft the primary lifting mechanism can be
tilted in a plurality of directions and angles
10 relative to the main body of the aircraft, in
a controlled manner, and such that the primary
lifting mechanism can be tilted in lateral
directions relative to the main body of the
aircraft during flight of the aircraft,
15 and such that a direction of travel of the
aircraft during flight can be altered by
altering the lateral direction or angle of
tilt of the primary lifting mechanism relative
to the main body of the aircraft, and which
20 said tilt enabling joint is a primary tilt
enabling joint, with the primary lifting
mechanism able to exert an upward force on
the forward end of the main body of the
aircraft through the primary tilt enabling
25 joint, and which secondary lifting

mechanism is connected to the main body of
the aircraft by an additional tilt enabling
joint, which said additional tilt enabling
joint is a secondary tilt enabling joint, and
5 which said secondary lifting mechanism is
connected to the main body of the aircraft by
the secondary tilt enabling joint such that
during flight of the aircraft the secondary
lifting mechanism can be tilted in a plurality of
10 directions and angles relative to the main body
of the aircraft, in a controlled manner,
and such that the secondary lifting mechanism
can be tilted in lateral directions relative
to the main body during flight of the aircraft,
15 and such that a direction of travel of the
aircraft during flight can be altered by altering
the lateral direction or angle of tilt of the
secondary lifting mechanism relative to the
main body, and which secondary tilt enabling
20 joint is such that the secondary lifting
mechanism can be tilted in a controlled
manner in a lateral direction with respect to
the main body of the aircraft during flight of
the aircraft that is opposite to a lateral
25 direction that the primary lifting mechanism
can be tilted in with respect to the main body
of the aircraft by means of the primary tilt

enabling joint during flight of the aircraft,
and which secondary lifting mechanism is able
to exert an upward force on the aft end of the
main body of the aircraft through the secondary
5 tilt enabling joint, with the primary tilt enabling
joint and the secondary tilt enabling joint connected
to the main body of the aircraft, and with the
aircraft able to achieve flight by means of an upward
force exerted on the main body of the aircraft
10 by the primary lifting mechanism through the
primary tilt enabling joint and an upward
force exerted on the main body of the aircraft
by the secondary lifting mechanism through
the secondary tilt enabling joint while the
15 primary lifting mechanism and the secondary
lifting mechanism are maintained in tandem order,
and with controlled lateral tilting of the
primary lifting mechanism and the secondary lifting
mechanism able to occur during flight while the
20 primary lifting mechanism and the secondary lifting
mechanism are maintained in tandem order.

8. The aircraft of claim 7 wherein the said jet
engines are turbojets.

9. The aircraft of claim 7 wherein the said jet
25 engines are turbofans.

10. An aircraft with a main body, a primary lifting
mechanism and a secondary lifting mechanism,
which main body has a forward end and an aft end,
with the primary lifting mechanism and secondary
5 lifting mechanism connected to the main body of
the aircraft in tandem order, and with the aircraft
able to achieve flight by means of upward
forces exerted on the main body of the aircraft
by the primary lifting mechanism and the
10 secondary lifting mechanism while the primary
lifting mechanism and secondary lifting
mechanism are connected to the main in
body of the aircraft in tandem order,
which primary lifting mechanism is a turboprop,
15 and which primary lifting mechanism is attached
to the primary tilt enabling joint such that air
can be forced in a downward direction by the
primary lifting mechanism, and such
that by forcing air in a downward direction
20 the primary lifting mechanism is able to
exert an upward force on the forward end of the
main body of the aircraft,
and the secondary lifting mechanism consists of
a jet engine, which jet engine is attached to the
25 secondary tilt enabling joint such that the jet

engine is able to force exhaust gases to travel
in a downward direction and such that by forcing

exhaust gases to travel in a downward direction
the jet engine can exert an upward force on the
aft end of the main body,

and which primary lifting mechanism is connected
to the main body of the aircraft by a tilt
enabling joint such that during flight of the
aircraft the primary lifting mechanism can be
tilted in a plurality of directions and angles
relative to the main body of the aircraft, in
a controlled manner, and such that the primary
lifting mechanism can be tilted in lateral
directions relative to the main body of the
aircraft during flight of the aircraft,
and such that a direction of travel of the
aircraft during flight can be altered by
altering the lateral direction or angle of tilt
of the primary lifting mechanism relative to
the main body of the aircraft, and which said
tilt enabling joint is a primary tilt
enabling joint, with the primary lifting
mechanism able to exert an upward force on
the forward end of the main body of the
aircraft through the primary tilt enabling
joint, and which secondary lifting

mechanism is connected to the main body of
the aircraft by an additional tilt enabling
joint, which said additional tilt enabling
joint is a secondary tilt enabling joint, and
5 which said secondary lifting mechanism is
connected to the main body of the aircraft by
the secondary tilt enabling joint such that
during flight of the aircraft the secondary
lifting mechanism can be tilted in a plurality of
10 directions and angles relative to the main body
of the aircraft, in a controlled manner,
and such that the secondary lifting mechanism
can be tilted in lateral directions relative
to the main body during flight of the aircraft,
15 and such that a direction of travel of the aircraft
during flight can be altered by altering the
lateral direction or angle of tilt of the
secondary lifting mechanism relative to the
main body, and which secondary tilt enabling
20 joint is such that the secondary lifting
mechanism can be tilted in a controlled
manner in a lateral direction with respect to
the main body of the aircraft during flight of
the aircraft that is opposite to a lateral
25 direction that the primary lifting mechanism

can be tilted in with respect to the main body
of the aircraft by means of the primary tilt
enabling joint during flight of the aircraft,
and which secondary lifting mechanism is able
5 to exert an upward force on the aft end of the
main body of the aircraft through the secondary
tilt enabling joint, with the primary tilt enabling
joint and the secondary tilt enabling joint connected
to the main body of the aircraft, and with the aircraft
10 able to achieve flight by means of an upward
force exerted on the main body of the aircraft
by the primary lifting mechanism through the
primary tilt enabling joint and an upward
force exerted on the main body of the aircraft
15 by the secondary lifting mechanism through
the secondary tilt enabling joint while the
primary lifting mechanism and the secondary
lifting mechanism are maintained in tandem order,
and with controlled lateral tilting of the
20 primary lifting mechanism and the secondary lifting
mechanism able to occur during flight while the
primary lifting mechanism and the secondary lifting
mechanism are maintained in tandem order.

11. The aircraft of claim 9 wherein the said jet
25 engine is a turbojet.

12. The aircraft of claim 9 wherein the said jet engine is a turbofan.

13. An aircraft with a main body, a primary lifting mechanism and a secondary lifting mechanism,

5 which main body has a forward end and an aft end, with the primary lifting mechanism and the secondary lifting mechanism connected to the main body of the aircraft in tandem order, and with the aircraft able to achieve flight by means of upward

10 forces exerted on the main body of the aircraft by the primary lifting mechanism and the secondary lifting mechanism while the primary lifting mechanism and the secondary lifting mechanism are connected to the main

15 body of the aircraft in tandem order,

 which primary lifting mechanism is a turboprop, and which primary lifting mechanism is attached to the primary tilt enabling joint such that air can be forced in a downward direction by the
20 primary lifting mechanism, and such that by forcing air in a downward direction the primary lifting mechanism is able to exert an upward force on the forward end of the main body of the aircraft,

25 and the secondary lifting mechanism consists of a plurality of jet engines, which jet engines are attached to the secondary tilt enabling joint

such that the jet engines are able to force
exhaust gases to travel in a downward direction
and such that by forcing exhaust gases to travel
in a downward direction the jet engines can exert
5 an upward force on the aft end of the main body,
and which primary lifting mechanism is connected
to the main body of the aircraft by a tilt
enabling joint such that during flight of the
aircraft the primary lifting mechanism can be
10 tilted in a plurality of directions and angles
relative to the main body of the aircraft, in
a controlled manner, and such that the primary
lifting mechanism can be tilted in lateral
directions relative to the main body of the
15 aircraft during flight of the aircraft, and such
that a direction of travel of the aircraft
during flight can be altered by altering the
lateral direction or angle of tilt of the
primary lifting mechanism relative to the
20 main body of the aircraft, and which said
tilt enabling joint is a primary tilt
enabling joint, with the primary lifting
mechanism able to exert an upward force on
the forward end of the main body of the
25 aircraft through the primary tilt enabling
joint, and which secondary lifting

mechanism is connected to the main body of
the aircraft by an additional tilt enabling
joint, which said additional tilt enabling
joint is a secondary tilt enabling joint, and
5 which said secondary lifting mechanism is
connected to the main body of the aircraft by
the secondary tilt enabling joint such that
during flight of the aircraft the secondary
lifting mechanism can be tilted in a plurality of
10 directions and angles relative to the main body
of the aircraft, in a controlled manner,
and such that the secondary lifting mechanism
can be tilted in lateral directions relative
to the main body during flight of the aircraft,
15 and such that a direction of travel of the
aircraft during flight can be altered by altering
the lateral direction or angle of tilt of the
secondary lifting mechanism relative to the
main body, and which secondary tilt enabling
20 joint is such that the secondary lifting
mechanism can be tilted in a controlled
manner in a lateral direction with respect to
the main body of the aircraft during flight of
the aircraft that is opposite to a lateral
25 direction that the primary lifting mechanism

can be tilted in with respect to the main body
of the aircraft by means of the primary tilt
enabling joint during flight of the aircraft,
and which secondary lifting mechanism is able
5 to exert an upward force on the aft end of the
main body of the aircraft through the secondary
tilt enabling joint, with the primary tilt enabling
joint and the secondary tilt enabling joint connected
to the main body of the aircraft, and with the aircraft
10 able to achieve flight by means of an upward
force exerted on the main body of the aircraft
by the primary lifting mechanism through the
primary tilt enabling joint and an upward
force exerted on the main body of the aircraft
15 by the secondary lifting mechanism through
the secondary tilt enabling joint while the
primary lifting mechanism and the secondary
lifting mechanism are maintained in tandem order,
and with controlled lateral tilting of the
20 primary lifting mechanism and the secondary lifting
mechanism able to occur during flight while the
primary lifting mechanism and the secondary lifting
mechanism are maintained in tandem order.

14. The aircraft of claim 13 wherein the said jet
25 engines are turbojets.

15. The aircraft of claim 13 wherein the said jet engines are turbofans.

16. An aircraft with a main body, a primary lifting mechanism and a secondary lifting mechanism, which main body has a forward end and an aft end, with the primary lifting mechanism and secondary lifting mechanism connected to the main body of the aircraft in tandem order, and with the aircraft able to achieve flight by means of upward forces exerted on the main body of the aircraft by the primary lifting mechanism and the secondary lifting mechanism while the primary lifting mechanism and secondary lifting mechanism are connected to the main body of the aircraft in tandem order, and which primary lifting mechanism comprises a rotor, an engine assembly, and a plurality of blades, with the said blades connected to the rotor, and which said engine assembly is able to rotate the said rotor, with the blades connected to the rotor such that when the rotor is rotated by the said engine assembly air can be forced in a downward direction by means of the blades rotating around the rotor, with the primary lifting mechanism able to exert an upward force on the forward end of the main body of the aircraft by forcing air in a

downward direction by way of the blades rotating around the rotor,

and the secondary lifting mechanism is a turboprop, which secondary lifting mechanism is attached to the secondary tilt enabling joint such that air can be forced in a downward direction by the secondary lifting mechanism, and such that by forcing air in a downward direction the secondary lifting mechanism is able to exert an upward force on the aft end of the main body of the aircraft,

and which primary lifting mechanism is connected to the main body of the aircraft by a tilt enabling joint such that during flight of the aircraft the primary lifting mechanism can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the primary lifting mechanism can be tilted in lateral directions relative to the main body of the aircraft during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering the lateral direction or angle of tilt of the primary lifting mechanism relative to the main body of the aircraft, and which said tilt enabling joint is a primary tilt enabling joint, with the primary lifting

mechanism able to exert an upward force on
the forward end of the main body of the
aircraft through the primary tilt enabling
joint, and which secondary lifting
5 mechanism is connected to the main body of
the aircraft by an additional tilt enabling
joint, which said additional tilt enabling
joint is a secondary tilt enabling joint, and
which said secondary lifting mechanism is
10 connected to the main body of the aircraft by
the secondary tilt enabling joint such that
during flight of the aircraft the secondary
lifting mechanism can be tilted in a plurality of
directions and angles relative to the main body
15 of the aircraft, in a controlled manner,
and such that the secondary lifting mechanism
can be tilted in lateral directions relative
to the main body during flight of the aircraft,
and such that a direction of travel of the
20 aircraft during flight can be altered by altering
the lateral direction or angle of tilt of the
secondary lifting mechanism relative to the
main body, and which secondary tilt enabling
joint is such that the secondary lifting
25 mechanism can be tilted in a controlled
manner in a lateral direction with respect to

the main body of the aircraft during flight of
the aircraft that is opposite to a lateral
direction that the primary lifting mechanism
can be tilted in with respect to the main body
5 of the aircraft by means of the primary tilt
enabling joint during flight of the aircraft,
and which secondary lifting mechanism is able
to exert an upward force on the aft end of the
main body of the aircraft through the secondary
10 tilt enabling joint, with the primary tilt enabling
joint and the secondary tilt enabling joint connected
to the main body of the aircraft, and with the aircraft
able to achieve flight by means of an upward
force exerted on the main body of the aircraft
15 by the primary lifting mechanism through the
primary tilt enabling joint and an upward
force exerted on the main body of the aircraft
by the secondary lifting mechanism through
the secondary tilt enabling joint while the
20 primary lifting mechanism and the secondary
lifting mechanism are maintained in tandem order
and with controlled lateral tilting of the
primary lifting mechanism and the secondary lifting
mechanism able to occur during flight while the
25 primary lifting mechanism and the secondary lifting
mechanism are maintained in tandem order.

17. An aircraft with a main body, a primary lifting
mechanism and a secondary lifting mechanism,
which main body has a forward end and an aft end,
with the primary lifting mechanism and secondary
5 lifting mechanism connected to the main body of
the aircraft in tandem order, and with the aircraft
able to achieve flight by means of upward
forces exerted on the main body of the aircraft
by the primary lifting mechanism and the
10 secondary lifting mechanism while the primary
lifting mechanism and secondary lifting
mechanism are connected to the main in
body of the aircraft in tandem order,
which primary lifting mechanism is a turboprop,
15 and which primary lifting mechanism is attached
to the primary tilt enabling joint such that air
can be forced in a downward direction by the
primary lifting mechanism, and such that by
forcing air in a downward direction the primary
20 lifting mechanism is able to exert an upward
force on the forward end of the main body of
the aircraft,
and which secondary lifting mechanism
comprises a rotor, an engine assembly, and a
25 plurality of blades, with the blades of the
secondary lifting mechanism connected to the

rotor of the secondary lifting mechanism, and which engine assembly of the secondary lifting mechanism is able to rotate the rotor of the secondary lifting mechanism, with the blades of the secondary lifting mechanism connected to the rotor of the secondary lifting mechanism such that when the rotor of the secondary lifting mechanism is rotated by the engine assembly of the secondary lifting mechanism air can be forced in a downward direction by means of the blades of the secondary lifting mechanism rotating around the rotor of the secondary lifting mechanism, with the secondary lifting mechanism able to exert an upward force on the aft end of the main body of the aircraft by forcing air in a downward direction by way of the blades of the secondary lifting mechanism rotating around the rotor of the secondary lifting mechanism, and which primary lifting mechanism is connected to the main body of the aircraft by a tilt enabling joint such that during flight of the aircraft the primary lifting mechanism can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the primary

lifting mechanism can be tilted in lateral
directions relative to the main body of the
aircraft during flight of the aircraft,
and such that a direction of travel of the
5 aircraft during flight can be altered by
altering the lateral direction or angle of tilt
of the primary lifting mechanism relative to
the main body of the aircraft, and which said
tilt enabling joint is a primary tilt
10 enabling joint, with the primary lifting
mechanism able to exert an upward force on
the forward end of the main body of the
aircraft through the primary tilt enabling
joint, and which secondary lifting
15 mechanism is connected to the main body of
the aircraft by an additional tilt enabling
joint, which said additional tilt enabling
joint is a secondary tilt enabling joint, and
which said secondary lifting mechanism is
20 connected to the main body of the aircraft by
the secondary tilt enabling joint such that
during flight of the aircraft the secondary
lifting mechanism can be tilted in a plurality of
directions and angles relative to the main body
25 of the aircraft, in a controlled manner,
and such that the secondary lifting mechanism

can be tilted in lateral directions relative to the main body during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering

5 the lateral direction or angle of tilt of the secondary lifting mechanism relative to the main body, and which secondary tilt enabling joint is such that the secondary lifting mechanism can be tilted in a controlled

10 manner in a lateral direction with respect to the main body of the aircraft during flight of the aircraft that is opposite to a lateral direction that the primary lifting mechanism can be tilted in with respect to the main body

15 of the aircraft by means of the primary tilt enabling joint during flight of the aircraft, and which secondary lifting mechanism is able to exert an upward force on the aft end of the main body of the aircraft through the secondary tilt

20 enabling joint, with the primary tilt enabling joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft able to achieve flight by means of an upward force exerted on the main body of the aircraft

25 by the primary lifting mechanism through the primary tilt enabling joint and an upward

force exerted on the main body of the aircraft
by the secondary lifting mechanism through
the secondary tilt enabling joint while the
primary lifting mechanism and the secondary
5 lifting mechanism are maintained in tandem order,
and with controlled lateral tilting of the
primary lifting mechanism and the secondary lifting
mechanism able to occur during flight while the
primary lifting mechanism and the secondary lifting
10 mechanism are maintained in tandem order.

18. The aircraft of claim 2 wherein
the engine assembly of the primary lifting
mechanism comprises a single engine and the
engine assembly of the secondary lifting
5 mechanism comprises a single engine.
19. The aircraft of claim 2 wherein
the engine assembly of the primary lifting
mechanism comprises a plurality of engines
and the engine assembly of the secondary lifting
10 mechanism comprises a single engine.
20. The aircraft of claim 2 wherein
the engine assembly of the primary lifting
mechanism comprises a single engine and the
engine assembly of the secondary lifting
15 mechanism comprises a plurality of engines.
21. The aircraft of claim 2 wherein
the engine assembly of the primary lifting
mechanism comprises a plurality of engines and the
engine assembly of the secondary lifting
20 mechanism comprises a plurality of engines.
22. The aircraft of claim 4 wherein
the engine assembly of the primary lifting
mechanism comprises a single engine.

23. The aircraft of claim 4 wherein
the engine assembly of the primary lifting
mechanism comprises a plurality of engines.
24. The aircraft of claim 7 wherein
5 the engine assembly of the primary lifting
mechanism comprises a single engine.
25. The aircraft of claim 7 wherein
the engine assembly of the primary lifting
mechanism comprises a plurality of engines.
- 10 26. The aircraft of claim 16 wherein
the engine assembly of the primary lifting
mechanism comprises a single engine.
27. The aircraft of claim 16 wherein
the engine assembly of the primary lifting
15 mechanism comprises a plurality of engines.
28. The aircraft of claim 17 wherein
the engine assembly of the secondary lifting
mechanism comprises a single engine.
29. The aircraft of claim 17 wherein
20 the engine assembly of the secondary lifting
mechanism comprises a plurality of engines.

30. The aircraft of any one of claims 1 to 29 wherein
the primary lifting mechanism is connected to the main body
by the primary tilt enabling joint such that the primary
lifting mechanism can be positioned above the main body of
5 the aircraft by means of the primary tilt enabling joint
during flight of the aircraft.

31. The aircraft of any one of claims 1 to 29 wherein
the primary lifting mechanism is connected to the main body
by the primary tilt enabling joint such that the primary
10 lifting mechanism can be positioned in front of the main
body of the aircraft by means of the primary tilt enabling
joint during flight of the aircraft.

32. The aircraft of any one of claims 1 to 29 wherein
the secondary lifting mechanism is connected to
15 the main body by the secondary tilt enabling joint such that
a part the secondary lifting mechanism can be positioned
behind the main body of the aircraft by means of the secondary
tilt enabling joint during flight of the aircraft.

33. The aircraft of any one of claims 1 to 29 wherein
20 the secondary lifting mechanism is connected to the main
body by the secondary tilt enabling joint such that the
secondary lifting mechanism can be positioned behind the
main body of the aircraft by means of the secondary tilt
enabling joint during flight of the aircraft.

34. The aircraft of claim 30 wherein the secondary
lifting mechanism is connected to the main body by the
secondary tilt enabling joint such that the secondary lifting
mechanism can be positioned behind the main body of the aircraft
5 by means of the secondary tilt enabling joint during flight of
the aircraft.

35. The aircraft of claim 31 wherein the secondary
lifting mechanism is connected to the main body by
the secondary tilt enabling joint such that the
10 secondary lifting mechanism can be positioned behind
the main body of the aircraft by means of the secondary
tilt enabling joint during flight of the aircraft.

36. The aircraft of claim 30 wherein the secondary
lifting mechanism is connected to the main body by
the secondary tilt enabling joint such that part of the
15 secondary lifting mechanism can be positioned behind the
main body of the aircraft by means of the secondary
tilt enabling joint during flight of the aircraft.

37. The aircraft of claim 31 wherein
20 the secondary lifting mechanism is connected to the
main body by the secondary tilt enabling joint such
that part of the secondary lifting mechanism can be positioned
behind the main body of the aircraft by means of the secondary
tilt enabling joint during flight of the aircraft.

38. The aircraft of any one of claims 1 to 29 wherein
the secondary lifting mechanism is connected to the
main body by the secondary tilt enabling joint such
that part of the secondary lifting mechanism can
5 be positioned above the main body of the aircraft by means of
the secondary tilt enabling joint during flight of the aircraft.
39. The aircraft of claim 30 wherein the secondary
lifting mechanism is connected to the main body by
the secondary tilt enabling joint such that the
10 secondary lifting mechanism can be positioned above the aft
end of the main body of the aircraft by means of the
secondary tilt enabling joint during flight of the aircraft.
40. The aircraft of claim 31 wherein the secondary
lifting mechanism is connected to the main body by
15 the secondary tilt enabling joint such that the
secondary lifting mechanism can be positioned above
the aft end of the main body of the aircraft by means of the
secondary tilt enabling joint during flight of the aircraft.
41. The aircraft of any one of claims 1 to 29
20 wherein the primary tilt enabling joint is
connected to the main body by a tilt enabling
joint, which said tilt enabling joint that
connects the primary tilt enabling joint to
the main body is a third tilt enabling joint,

and which said third tilt enabling joint is such that the primary tilt enabling joint can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, by means of the third
5 tilt enabling joint without components of the primary tilt enabling joint having to move with respect to one another.

42. The aircraft of any one of claims 1 to 29 wherein the primary tilt enabling joint has a movement enabling assembly that enables the primary
10 tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the primary tilt enabling joint, and the secondary tilt enabling joint has a movement enabling assembly that allows the secondary tilt enabling joint to
15 move and a tilt activating mechanism that causes and controls the movement of the secondary tilt enabling joint to occur, which movement enabling assembly of the secondary tilt enabling joint is a secondary movement enabling assembly, and which said tilt
20 activating mechanism of the secondary tilt enabling joint is a secondary tilt activating mechanism.

43. The aircraft of claim 42 wherein the primary
tilt enabling joint is connected to the main
body by a tilt enabling joint, which said tilt
enabling joint that connects the primary tilt
5 enabling joint to the main body is a third tilt
enabling joint, and which said third tilt
enabling joint is such that the primary tilt
enabling joint can be tilted in a plurality of
directions and angles relative to the main body
10 of the aircraft, in a controlled manner, without
components of the primary tilt enabling joint
having to move with respect to one another,
and which third tilt enabling joint has a
movement enabling assembly that enables the
15 third tilt enabling joint to move and a tilt
activating mechanism that can cause and control
the movement of the third tilt enabling joint.

44. The aircraft of claim of 42 wherein the
movement enabling assembly of the primary tilt
20 enabling joint is a universal joint and the
tilt activating mechanism of the primary tilt
enabling joint comprises as plurality of
hydraulic actuators connected to the universal
joint of the primary tilt enabling joint and the
25 movement enabling assembly of the secondary tilt

enabling joint is a universal joint, with the tilt
activating mechanism of the secondary tilt enabling
joint comprising a plurality of hydraulic actuators
connected to the universal joint of the secondary
5 tilt enabling joint.

45. The aircraft of any one of claims 1 to 29 wherein
the secondary lifting mechanism is connected to the
the secondary tilt enabling joint by a rotating mechanism
such that during flight of the aircraft the secondary lifting
10 mechanism can be rotated in a controlled manner relative to
the secondary tilt enabling joint by means of the rotating
mechanism.

46. The aircraft of any one of claims 1 to 29 wherein
the secondary tilt enabling joint is connected to the
15 main body of the aircraft by a rotating mechanism such that
during flight of the aircraft the secondary tilt enabling
joint can be rotated relative to the main body of the
aircraft in a controlled manner by means of the rotating
mechanism.

47. The aircraft of claim 46

wherein the primary tilt enabling joint has a
movement enabling assembly that enables the primary
tilt enabling joint to move and a tilt activating
5 mechanism that can cause and control the movement
of the primary tilt enabling joint, and the secondary
tilt enabling joint has a movement enabling assembly
that allows the secondary tilt enabling joint to
move and a tilt activating mechanism that causes and
10 controls the movement of the secondary tilt enabling
joint to occur, which movement enabling assembly of
the secondary tilt enabling joint is a secondary
movement enabling assembly, and which said tilt
activating mechanism of the secondary tilt enabling
15 joint is a secondary tilt activating mechanism.

48. The aircraft of claim of 47 wherein the

movement enabling assembly of the primary tilt
enabling joint is a universal joint and the tilt
activating mechanism of the primary tilt enabling
20 joint comprises a plurality of hydraulic actuators
connected to the universal joint of the primary
tilt enabling joint, and the movement enabling
assembly of the secondary tilt enabling joint is
a universal joint, with the tilt activating
25 mechanism of the secondary tilt enabling joint

comprising a plurality of hydraulic actuators connected to the universal joint of the secondary tilt enabling joint.

49. The aircraft of claim 47 wherein the primary
5 tilt enabling joint is connected to the main body by a tilt enabling joint, which said tilt enabling joint that connects the primary tilt enabling joint to the main body is a third tilt enabling joint, and which said third tilt
10 enabling joint is such that the primary tilt enabling joint can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, without components of the primary tilt enabling joint
15 having to move with respect to one another, and which third tilt enabling joint has a movement enabling assembly that enables the third tilt enabling joint to move and a tilt activating mechanism that can cause and control
20 the movement of the third tilt enabling joint.
50. The aircraft of claim 48 wherein a fin is connected to the secondary lifting mechanism such that the fin protrudes outward from the secondary lifting mechanism.
51. The aircraft of claim 36 wherein the primary tilt enabling joint has a movement enabling assembly that enables the primary

tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the primary tilt enabling joint, and the secondary tilt enabling joint has a movement enabling assembly that allows the secondary tilt enabling joint to move and a tilt activating mechanism that causes and controls the movement of the secondary tilt enabling joint to occur, which movement enabling assembly of the secondary tilt enabling joint is a secondary movement enabling assembly, and which said tilt activating mechanism of the secondary tilt enabling joint is a secondary tilt activating mechanism, and which primary tilt enabling joint is connected to the main body by a tilt enabling joint, which said tilt enabling joint that connects the primary tilt enabling joint to the main body is a third tilt enabling joint, and which said third tilt enabling joint is such that the primary tilt enabling joint can be tilted in a plurality of directions and angles, in a controlled manner, and wherein the third tilt enabling joint has a movement enabling assembly that enables the third tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the third tilt enabling joint.

52. The aircraft of claim 51 wherein the secondary tilt enabling joint is connected to the main body of the aircraft by a rotating mechanism such that during flight of the aircraft the secondary tilt enabling joint can be rotated relative to the main body of the aircraft in a controlled manner by means of the rotating mechanism.

53. The aircraft of claim of 42 wherein the movement enabling assembly of the primary tilt enabling joint is a plurality of hinges transversely connected to one another and the tilt activating mechanism of the primary tilt enabling joint comprises a plurality of hydraulic actuators connected to the movement enabling assembly of the primary tilt enabling joint, and the movement enabling assembly of the secondary tilt enabling joint is a universal joint, with the tilt activating mechanism of the secondary tilt enabling joint comprising a plurality of hydraulic actuators connected to the universal joint of the secondary tilt enabling joint.

54. The aircraft of claim of 42 wherein the
movement enabling assembly of the primary tilt
enabling joint is a plurality of hinges
transversely connected to one another and the tilt
5 activating mechanism of the primary tilt enabling
joint comprises as plurality of hydraulic actuators
connected to the movement enabling assembly of
the primary tilt enabling joint, and the
movement enabling assembly of the secondary tilt
10 enabling joint is a plurality of hinges
transversely connected to one another with the tilt
activating mechanism of the secondary tilt enabling
joint comprising a plurality of hydraulic actuators
connected to the movement enabling assembly of
15 the secondary tilt enabling joint.

55. The aircraft of claim of 42 wherein the
movement enabling assembly of the primary tilt
enabling joint is a universal joint and the tilt
activating mechanism of the primary tilt enabling
20 joint comprises as plurality of hydraulic actuators
connected to the universal joint of the primary
tilt enabling joint and the movement enabling
assembly of the secondary tilt enabling joint is a
plurality of hinges transversely connected to one
25 another with the tilt activating mechanism of the

secondary tilt enabling joint comprising a plurality of hydraulic actuators connected to the movement enabling assembly of the secondary tilt enabling joint.

56. The aircraft of any one of claims 1 to 29 wherein the primary
5 lifting mechanism is connected to the main body of the aircraft by means of the primary tilt enabling joint such that the primary lifting mechanism can be tilted in a forward direction and a rearward direction relative to the main body of the aircraft, in a controlled manner, by means
10 of the primary tilt enabling joint and the secondary lifting mechanism is connected to the main body of the aircraft by means of the secondary tilt enabling joint such that the secondary lifting mechanism can be tilted in a forward and rearward
15 direction relative to the main body of the aircraft, in a controlled manner, by means of the secondary tilt enabling joint.
57. The aircraft of claim 36 wherein the primary lifting mechanism is connected to the main body of the aircraft by means of the primary tilt enabling joint such that
20 the primary lifting mechanism can be tilted in a forward direction and a rearward direction relative

to the main body of the aircraft, in a controlled manner, by means of the primary tilt enabling joint, and the secondary lifting mechanism is connected to the main body of the aircraft by means of the secondary tilt enabling joint such that the secondary lifting mechanism can be tilted in a forward and rearward direction relative to the main body of the aircraft, in a controlled manner, by means of the secondary tilt enabling joint.

58. The aircraft of claim 57 wherein the primary tilt enabling joint comprises a plurality of movement enabling assemblies that enable the primary tilt enabling joint to have a tilt motion and a plurality of tilt activating mechanisms that can cause and control the movement of the primary tilt enabling joint, and the secondary tilt enabling joint comprises a plurality of movement enabling assemblies that allow the secondary tilt enabling joint to move and a plurality of tilt activating mechanism that can cause and control the movement of the secondary tilt enabling joint.

59. The aircraft of any one of claims 1 to 29 wherein the primary lifting mechanism is connected to

the main body by the primary tilt enabling joint
such that the whole of the primary lifting mechanism
can be placed in position that is in front of and
above the main body of the aircraft by means of the
5 primary tilt enabling joint during flight of the aircraft.

60. The aircraft of any one of claims 1 to 29 wherein the secondary
lifting mechanism is connected to the main body by the secondary
tilt enabling joint such that the whole of the secondary
lifting mechanism can be placed in a position that is
10 above and behind the main body of the aircraft by means of
the secondary tilt enabling joint during flight of the aircraft.

61. The aircraft of claim 59 wherein the secondary lifting
mechanism is connected to the main body by the secondary tilt
enabling joint such that the whole of the secondary lifting
15 mechanism can be placed in a position that is above and
behind the main body of the aircraft by means of the
secondary tilt enabling joint during flight of the aircraft.

62. The aircraft of any one of claims 1 to 29 wherein
the primary lifting mechanism is connected to
20 the main body by the primary tilt enabling joint such that a
part of the primary lifting mechanism can be positioned in
front of the main body of the aircraft by means of the
primary tilt enabling joint during flight of the aircraft.

63. The aircraft of claim 62 wherein the secondary lifting
mechanism is connected to the main body by the secondary tilt
enabling joint such that the secondary lifting mechanism can
be positioned behind the main body of the aircraft by means of
5 the secondary tilt enabling joint during flight of the aircraft.

64. The aircraft of claim 62 wherein the secondary lifting
mechanism is connected to the main body by the secondary tilt
enabling joint such that part of the secondary lifting
mechanism can be positioned behind the main body of the
10 aircraft by means of the secondary tilt enabling joint during
flight of the aircraft.

65. The aircraft of claim 62 wherein the secondary lifting
mechanism is connected to the main body by the secondary tilt
enabling joint such that the secondary lifting mechanism can
15 be positioned above the aft end of the main body of the
aircraft by means of the secondary tilt enabling joint during
flight of the aircraft.

66. The aircraft of claim 59 wherein by means of the primary
tilt enabling joint the primary lifting mechanism can be
20 placed in a position such that only a part of the primary
lifting mechanism is in front of the main body of the aircraft
by means of the primary tilt enabling joint during flight of
the aircraft.

67. The aircraft of claim 60 wherein by means of the secondary tilt enabling joint the secondary lifting mechanism can be placed in a position such that only a part of the secondary lifting mechanism is in behind of the main body of the aircraft
- 5 by means of the secondary tilt enabling joint during flight of the aircraft.
68. The aircraft of claim 46 wherein the secondary lifting mechanism is connected to the main body by the secondary tilt enabling joint such that the whole of the secondary
- 10 lifting mechanism can be placed in a position that is above and behind the main body of the aircraft by means of the secondary tilt enabling joint during flight of the aircraft.
69. The aircraft of claim 68 wherein by means of the secondary tilt enabling joint the secondary lifting mechanism can be
- 15 placed in a position such that no part of the secondary lifting mechanism is in behind of the main body of the aircraft.
70. The aircraft of claim 69 wherein the primary lifting mechanism is connected to the main body by the primary tilt enabling joint
- 20 such that by means of the primary tilt enabling joint the whole of the primary lifting mechanism can be placed in position that is in front of and above the main body of the aircraft during flight of the aircraft.

71. The aircraft of claim 70 wherein by means of the primary tilt enabling joint the primary lifting mechanism can be placed in a position such that only a of part of the primary lifting mechanism is in front of the main body of the aircraft.

5 72. The aircraft of claim 71 wherein the primary lifting mechanism is connected to the main body of the aircraft by means of the primary tilt enabling joint such that the primary lifting mechanism can be tilted in a forward direction and a rearward direction relative to the
10 main body of the aircraft, in a controlled manner, by means of the primary tilt enabling joint and the secondary lifting mechanism is connected to the main body of the aircraft by means of the secondary tilt enabling joint such that the secondary lifting
15 mechanism can be tilted in a forward and rearward direction relative to the main body of the aircraft, in a controlled manner, by means of the secondary tilt enabling joint.

73. The aircraft of claim 72 wherein a fin is connected
20 to the secondary lifting mechanism such that the fin protrudes outward from the secondary lifting mechanism.

73. The aircraft of claim 45 wherein

the secondary tilt enabling joint is such that
the secondary lifting mechanism is able to be tilted
in a forward direction, a rearward direction, and in
5 lateral directions with respect to the main body of the
aircraft by means of the secondary tilt enabling joint.

73. The aircraft of claim 46 wherein

the secondary tilt enabling joint is such that
the secondary lifting mechanism is able to be tilted
10 in a forward direction, a rearward direction, and in
lateral directions with respect to the main body of the
aircraft by means of the secondary tilt enabling joint.

73. The aircraft of claim 52 wherein

the secondary tilt enabling joint is such that
15 the secondary lifting mechanism is able to be tilted
in a forward direction, a rearward direction, and in
lateral directions with respect to the main body of the
aircraft by means of the secondary tilt enabling joint.

74. The aircraft of any one of claims 1 to 29 wherein

20 the secondary lifting mechanism is connected to the
secondary tilt enabling joint by a rotating mechanism such
that during flight of the aircraft the secondary lifting
mechanism can be rotated in a controlled manner relative to
the secondary tilt enabling joint by means of the rotating

mechanism,

and the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.

75. The aircraft of claim 74 wherein

the secondary tilt enabling joint is such that the secondary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the secondary tilt enabling joint.

76. The aircraft of claim 41 wherein

the primary tilt enabling joint is such that the primary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the primary tilt enabling joint.

77. The aircraft of claim 43 wherein

the primary tilt enabling joint is such that the primary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the primary tilt

enabling joint,

and the primary tilt enabling joint is
connected to the main body by an additional tilt enabling
joint, which said additional tilt enabling joint that connects
5 the primary tilt enabling joint to the main body is a third
tilt enabling joint, and which said third tilt enabling joint
is such that the primary tilt enabling joint can be tilted in
a plurality of directions and angles relative to the main
body of the aircraft, in a controlled manner, and which third
10 tilt enabling joint has a movement enabling assembly that
enables the third tilt enabling joint to move and a tilt
activating mechanism that can cause and control the movement
of the third tilt enabling joint.

78. The aircraft of claim 45 wherein

15 the primary tilt enabling joint is such that the primary
lifting mechanism is able to be tilted in a forward direction,
a rearward direction, and in lateral directions with respect
to the main body of the aircraft by means of the primary tilt
enabling joint,

20 and the primary tilt enabling joint is
connected to the main body by a tilt enabling
joint, which said tilt enabling joint that connects
the primary tilt enabling joint to the main body is a third
tilt enabling joint, and which said third tilt enabling joint

is such that the primary tilt enabling joint can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and which third tilt enabling joint has a movement enabling assembly that
5 enables the third tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the third tilt enabling joint,

and the secondary tilt enabling joint is such that the secondary lifting mechanism is able to be tilted
10 in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the secondary tilt enabling joint.

79. The aircraft of claim 46 wherein

the primary tilt enabling joint is such that the primary
15 lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the primary tilt enabling joint,

and the primary
20 tilt enabling joint is connected to the main body by an tilt enabling joint, which said tilt enabling joint that connects the primary tilt enabling joint to the main body is a third tilt enabling joint, and which said third tilt enabling joint is such that the primary tilt

enabling joint can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and which third tilt enabling joint has a movement enabling assembly that enables the third tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the third tilt enabling joint,

and the secondary tilt enabling joint is such that the secondary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the secondary tilt enabling joint.

80. The aircraft of claim 76 wherein

the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.

81. The aircraft of claim 77 wherein

the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the

position of the secondary lifting mechanism with respect to the main body of the aircraft.

82. The aircraft of claim 78 wherein

the primary lifting mechanism and the secondary lifting
5 mechanism are connected to the main body of the aircraft
such that the primary lifting mechanism is further forward
with respect to the main body of the aircraft than is the
position of the secondary lifting mechanism with respect to
the main body of the aircraft.

10 83. The aircraft of claim 79 wherein

the primary lifting mechanism and the secondary lifting
mechanism are connected to the main body of the aircraft
such that the primary lifting mechanism is further forward
with respect to the main body of the aircraft than is the
15 position of the secondary lifting mechanism with respect to
the main body of the aircraft.

84. The aircraft of claim 41 wherein

the primary lifting mechanism and the secondary lifting
mechanism are connected to the main body of the aircraft
20 such that the primary lifting mechanism is further forward
with respect to the main body of the aircraft than is the
position of the secondary lifting mechanism with respect
to the main body of the aircraft.

85. The aircraft of claim 45 wherein

the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.

- 86/ 85. The aircraft of any one of claims 1 to 29 wherein the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.